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the same time with the other gold-finches.

I have concluded from the foregoing that so-called *arizonæ* is only an extreme, and by no means uncommon, male plumage of the Arkansas Goldfinch, in which the black dorsal markings become to a varying degree extended. For this reason I included

arizonæ in its various combinations among the synonyms of *Astragalinus psaltria psaltria* in the Checklist. This of course must be understood to apply only to California birds. The status of the *psaltria* group elsewhere may be entirely otherwise. There are no specimens at hand, so I have no means of knowing.

Nesting of Swainson Hawk.

BY C. S. SHARP, ESCONDIDO, CAL.

THE Swainson hawk (*Buteo swainsoni*) is one of the most interesting of our western raptors. Less well known, perhaps, because of its quiet and unassuming nature and its lack of propensity to wander but it is one of our most useful birds and well worthy of every protection from the naturalist and the farmer. Indeed there is no one of the raptorial group that is more generally beneficial, for its food supply consists wholly of those four-footed pests which every farmer and ranch man recognizes as among his worst enemies.

Of the breeding hawks of this section although the only one that is not resident, it is the most abundant, and seems to have become more so in recent years than formerly. Previous to 1897 it was quite scarce and I very seldom saw it although I frequently recognized it in descriptions by the small boys here, of a bird they called the "Mexican black hawk" or the "five dollar hawk" from the price of the eggs of that species in Lattin's catalogue. Up to that time *Buteo lineatus elegans* was quite common but *swainsoni* seems to have taken its place to a large extent, and the former is now very scarce—so much so that when in 1896 there were four pair of birds breeding in a stretch of river timber of about two miles there is now only one. All the old nests are occupied by owls or the *swainsoni*.

While *Buteo borealis calurus* is more

common in the higher foothill country *swainsoni* seems to prefer the lower levels and especially favors the fringe of sycamores and cottonwood trees along the rivers, becoming seemingly attached to a certain locality and returning to it year after year. Each pair of hawks seems to have its particular hunting ground and they never stray far from home. The appearance of a pair of these birds in the breeding season is a pretty certain indication that their nest is near. They are indefatigable hunters and from their first arrival until their departure in the fall they may be constantly seen circling high in air or sailing low over fields and hillsides ever on the watch for some luckless squirrel or mouse that has wandered too far from protecting shelter. Of these and other four-footed pests of the farmer, with an occasional lizard or insect it makes its diet and is essentially *not* a "hen hawk."

It seems to have only a passing fancy for small birds and doubtless would not take them if other food were in plenty. This fact the small birds seem to understand and do not fear to build their nests in the same tree with them. I have found nests of *Icterus bullocki*, *Colaptes cafer collaris*, *Tyrannus verticalis*, *Zenaidura macroura* and *Carpodacus mexicanus frontalis* all in the same tree with *swainsoni* and the nest of the saucy *Carpodacus* was snugly ensconced on the side of the latter. No other

hawk would allow such great familiarity and the smaller birds know it for they do not attempt it with them.

The Swainson hawks arrive here from the south about the 10th to 20th of March, sometimes in large flocks or in bands of a dozen or two. The earliest and largest flocks all go north, the summer residents not coming until a couple or three weeks later, and going at once to their quarters which they refit preparatory to permanent occupancy later on. The species, as it appears in this locality, and so far as I know throughout the state, is of the very dark phase of plumage. I have watched the migrations and the breeding birds here very carefully for several years in the hope of finding a light colored specimen but nothing but the dark phase has ever come under my observation. Specimens of both sexes in my collection show no conspicuous white areas on under parts—indeed no white at all, the body being of a uniform dark brown throughout.

The darkest specimen (a female) shows only a lighter tawny coloring on tibiae, flanks and crissum. The lightest (a younger male) shows much more tawny on tibiae, flanks and crissum and extending up over the belly, and the lining of wings is lighter than in any specimen I have seen, showing whitish darker and tawny barring, the rest being the same dark brown as in other specimens. In view of the present tendency for subdivision it seems strange that this dark phase of *swainsoni* should have escaped. If one compares the bird with the book description—Coues for instance—he will be at a loss to know where to place it for Coues speaks of the “immaculate throat” and “white under parts, etc.” which are wholly lacking in the bird we have here. Dr. A. K. Fisher has written me that the dark phase is not wholly restricted as to locality and that there is a seeming tendency among dark birds to develop light colored young and vice versa. I have never observed such an

occurrence here. I am not wholly a believer in the present hair-splitting tendency for subdivision but it seems to me that one dark phase of *Buteo swainsoni* should be worthy of recognition.

The nest of the Swainson hawk is the usual bulky, unsightly mass of sticks of the raptore, and is placed near the top or on a small outlying branch of a cottonwood or sycamore at an elevation of about 50 feet. (My records run from 35 to 75 feet.) Occasionally a live oak will be taken but as I know of only one such instance, it can hardly be considered regular in this section, at least.

If disturbed from the nest the bird will glide gently away without a sound, sometimes to a nearby tree where it will sit until the intruder is gone but most always to a distance of a quarter or half a mile where it will sail in wide circles in apparent indifference. Although the birds—even if their eggs are taken—will return to the same locality year after year and generally to their first nest I have never known them to attempt a second set in a nest just disturbed.

They sometimes will occupy an old nest nearby, but in almost every instance in my experience have built a new nest quite near to the old one but a little higher up and a little further out towards the end of the branch, as though they had learned wisdom by experience. On May 5, 1901 a set of two eggs was taken from a sycamore about fifty feet from the ground, nowhere near the top of the tree. The birds moved to another sycamore 200 yards away and by May 12 a week later, had built another nest at the top of the tree and seventy-two feet from the ground. This also contained two eggs which were taken. The birds then moved on a few hundred yards to a much taller sycamore and built a nest in the top of that, and well out of reach and raised their young in peace.

The new nest built for this second set was, naturally, a very poor affair,

being scarcely more than a shell and almost flat, very different indeed from most of the new ones I have examined. They usually show more art in construction than those of other raptors, being made of smaller and thinner sticks and twigs and are more smoothly put together, showing fewer projecting ends from the sides. The lining is usually of leaves of the tree the nest is in; sometimes a little grass or some willow bark or rabbits' or squirrels' fur. Nesting begins in April. My earliest record is April 15. Fresh eggs may be taken until the middle of May, but the later ones are second sets. Third sets are very unusual and show an amount of perseverance in the birds that should be respected.

Almost all the sets from this section

that I have seen are lightly marked. One set in my collection shows only a few very small "pen splashes" of black; another shows "pin point" spots of lavender almost all over one egg, while the other is practically spotless. This set is a modified pyriform in shape, another set with a creamy ground color has the markings, shape and size of a certain phase of *Buteo lineatus elegans* and if I had not seen Mme. Swainsoni leave the nest I should have mistaken it for that species.

I find sets of two and three in about equal numbers never anything more, but on May 26, 1901, I found a nest containing one newly hatched young and no trace of another egg. This is the only case of one that I have met with.

The Audubon Warbler in Washington.

BY J. H. BOWLES, TACOMA, WASH.

AUDUBON Warbler (*Dendroica auduboni*) is the largest, handsomest and hardiest of all the warblers found in the state of Washington, where it is a fairly common summer resident. In their habits and general appearance they are exceedingly like their close relative of the east, the yellow-rumped or myrtle warbler (*Dendroica coronata*), which also occurs on the Pacific coast in limited numbers. It is, perhaps, unnecessary to add that the yellow throat of *auduboni* easily distinguishes it from the white throat of *coronata*.

It would be difficult to say just when the first of them make their appearance from the south, or when they return, as I have strong suspicions that a few remain with us throughout the year. The main force of the migration occurs about the middle of April, and by the second week in May all have passed northward excepting such as intend to nest. The return trip occurs about the last of September. They are essentially birds of the prairie regions, where scattering clumps of fir are plen-

tiful, seldom being seen in the deep woods.

The food supply consists of small insect life of all kinds, and they are most expert in the art of flycatching in mid-air. Socially inclined toward mankind, spending much of their time on and around houses in cities, beautiful in plumage, and graceful on the wing, their song is the only disappointing thing about them. It is a short, though pleasing, little warble, surprisingly feeble for so large a bird, and in no way equal to that of its smaller relative the yellow warbler (*D. æstiva*.)

It is in their nesting habits, however, that *auduboni* show their most interesting and original traits, as the first nests are built before any but the most careful observers know that the birds have arrived from the south. My earliest nesting date is April 22, when my brother, Mr. C. W. Bowles, found a nest containing four eggs within a day of hatching. As the period of incubation for these birds is twelve days, this would have made the first egg laid not later than April 8. Nor is this such an